Sino Soviet Bloc production of nickel in 1958 is estimated at 65,700 net tons, of which 65,500 were produced in the USSR and 200 tons in East Germany. The USSR is believed to have exported 6,500 tons of its output to the European Satellites and Communist China in that year. Following the relaxation of COCOM restrictions on shipments of nickel to Bloc countries in August of 1958, the Bloc supply was augmented by about 3,300 tons from free world sources. All of these sales were reported to have been made to Communist China or European Satellite countries.

The nickel supply position in the Sino Soviet Bloc in 1958 and the pounds of nickel per ton of steel production represented by this supply are estimated as follows:

Sino-Soviet Bloc Nickel Supply Position

1958

(Net Tons)

	Nickel Production	Exports	Imports	Apparent Supply	Lbs. of Nickel per Ton of Steel Production
USSR	65,500	6,500	-	59,000	1.95
European Satellites and Communist China	200	-	9,800*	10,000	0.70
US Consumption 1957**				122,500	2.17

* 6,500 tons from USSR, 3,300 tons from Free World

** US consumption in 1958 was 1.9 lbs. of nickel per ton of steel production.

Effect of COCOM Relaxation

In August of 1958 COCOM placed nickel metal and nickel-based alloys on List IV (Watch List) with a tentative maximum of 1,000 metric tons per month, the equivalent of 13,500 net tons per year. Although this rate of shipment was not attained during the few remaining months of 1958, Bloc purchases during 1959 are reported to be approximating the full quota.

The availability of 13,500 tons of free world nickel to Communist China and the European Satellites during 1958 and the consequent retention by the USSR of the 6,500 tons furnished to them in that year would have resulted in an apparent supply of nickel in the USSR equivalent to 2.18 lbs. per ton of steel production, compared to US consumption of 2.17 lbs. in 1957 and 1.9 lbs. in 1958. Availability in the European Satellites and Communist China would have increased to 1 lb. of nickel per ton of steel. It is estimated that the availability of nickel in the Sino-Soviet Bloc in 1959 will approximate the foregoing amounts unless COCOM restrictions are reimposed.

Discussion

The Soviet military program, including the output of military hard goods, equals if it does not exceed that of the US. Metallurgical practices in the use of nickel are substantially the same in each country. The Soviet requirement for nickel for military applications is therefore estimated to equal the 36,750 tons consumed by the US for those purposes in 1957, or 62 percent of the USSR apparent supply of 59,000 tons of nickel in 1958.

In addition to the extensive use of nickel for military purposes in peacetime the USSR is known to stockpile this essential metal. In view of the relatively few years during which the USSR has produced nickel in significant quantities and of the probable demands of a conventional war, current Soviet allocations for stockpiling are estimated at a minimum of 5,000 tons per year.* Soviet requirements for nickel for peacetime military programs and for strategic stockpiling thus account for 41,750 tons, 1.38 lbs. of nickel per ton of steel output, and 71% of the apparent supply in 1958.

By these standards the apparent supply of 0.70 lbs. of nickel per ton of steel production in the European Satellites and Communist China is sufficient only for uses of the highest priority, principally military.

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* The US has stockpiled in excess of 25,000 tons of nickel in some years.

More than two thirds of Soviet nickel is produced well above the Arctic Circle at Norilsk and on the Kola Peninsula. Ores are lean relative to those being exploited in the West and investment costs are high. The 5 billion rubles allocated to double Soviet nickel production during the Seven Year Plan period represents an investment of 76,000 rubles per ton of annual refined nickel capacity, equivalent to $15,200 at a conversion rate* of 5 rubles of $1.00. The International Nickel Company's investment at the Thompson mine in northern Manitoba, including the cost of opening and developing the mine and constructing a mill, smelter, refinery, power plant, community installations and dwellings and a 30-mile railroad connection is expected to be $4,660 per ton of annual refined nickel capacity.

Lean ores, high investment cost and difficult operating conditions are reflected in the internal Soviet nickel price of 30,000 rubles per metric ton, or 13.60 rubles per pound. Converted at 6 rubles to $1.00, the weighted average ratio of Soviet/US ruble/dollar prices for steel mill products, Soviet nickel costs the purchaser the equivalent of $2.26 per lb., three times the free world price of $0.75. Put another way, the Soviet internal ruble price for nickel is 18 times the free world price in dollars, whereas Soviet ruble prices for steel mill products average 6 times free world prices in dollars.

In spite of relatively high costs of development and extraction, the Sino Soviet Bloc is proceeding energetically to avoid dependence on the free world for supplies of nickel by expanding its indigenous production. Plans thus far announced include:

a. The USSR Seven Year Plan provides for a 100 percent increase in nickel output in contrast to approximately 60 percent in crude steel.

b. East Germany is expanding ferronickel capacity at St. Egidien to 2,800 tons of contained nickel by 1962/63 and further increases are planned for later years.

c. Czechoslovakia is constructing facilities to extract approximately 2,000 tons per year of nickel from Albania ores in 1962.

d. In 1959 North Korea commenced producing nickel at the rate of 400/500 tons per year at Hungnam.

e. Communist China has reported important discoveries of nickel bearing ores but no definite plans for their exploitation have as yet been announced.

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* The rate determined by comparing and averaging Soviet and US construction and equipment prices.

Conclusions

A. Nickel meets criterion (a) in that it is used principally in the Sino-Soviet Bloc for the development, production or utilization of arms, ammunition or implements of war.

B. (NOTE, Item 4661) The removal of nickel metal from List I has not: (1) discouraged the expansion of satellite refining capacity or (2) prevented stockpiling by the USSR. It has, on the contrary, made increased stockpiling feasible and has increased the USSR availability of nickel per ton of steel production to the US level.

C. The availability of nickel from the free world will not cause the Bloc to become dependent on that source.

D. The purchase of nickel at free world prices represents an economic bargain to Bloc countries and permits re-exportation at less loss than would result from the absorption of internal costs. In addition, these free world supplies are conveniently available for stockpiling or other purposes, and permit flexibility in investment plans for increasing indigenous production of nickel and in meeting production goals in other industries competing for investment funds.